July 3, 1984

Mr. Tom Dixon
Chief, Pipeline Safety Section
North Carolina Utilities Commission
P.O. Box 991
Raleigh, North Carolina 27602

Dear Mr. Dixon:

Your letter of June 4, 1984, requests clarification of the application of §§192.321 and 192.325 concerning the use of a tracer wire with plastic pipe. You particularly voice a concern with respect to the location of service lines in relation to the tracer wire required by §192.321(e) and the application of the requirement for clearance of plastic pipe from a heat source in §192.325(c).

It should be noted that Subpart G, and thus both §§192.321 and 192.325, is limited by §192.301, Scope, to transmission lines and mains. There are no requirements in Part 192 for installation of a tracer wire on plastic service lines, although many operators do this as a standard practice. We believe it is a good idea to install a tracer wire on a plastic service line; however, we have never received a petition or developed an evaluation justifying regulatory action on this subject.

In developing the requirements in §192.325(c) for plastic pipe to be installed with sufficient clearance or insulated from any source of heat so as to prevent the heat from impairing the service of the pipe a tracer wire was not considered as a potential heat source. As a result of your letter, a search was made of the individual leak reports (DOT F7100.1) for 1983. This effort produced two reports (copies enclosed) of incidents where lightning strikes caused tracer wires to be heated excessively, thus causing failures of plastic pipe.

In a review of the telephonic reports made during 1983, we found many incidents that indicated lightning strikes, of which 11 did not give the material of the pipeline involved and three were indicated as plastic. Telephone calls were made to the reporting operators for each of the 14 incidents. Five of these incidents were on plastic pipe but did not involve damage from tracer wires. The remaining nine incidents were on metallic pipelines.

In addition to the above effort, nine different large gas operators were selected and contacted to give a geographic spread across the lower 48 states to determine the extent of the problem. One very large operator recalled only a couple of incidents involving plastic pipe and tracer wires in the past 10 years, while all of the remaining eight operators indicated this type failure was very rare or they had no problem at all. One operator commented that in his area lighting storms were so rare that when they did occur, people would often go outside to watch them.

From the review discussed above, we do not believe that a Federal regulation requiring a specified clearance between a tracer wire and plastic pipe could be justified on a cost/benefit basis. However, we will continue to monitor the telephonic reports for incidents of lightning damage resulting from the tracer wire being in contact with the plastic pipe.

We hope this answers your questions adequately.

Sincerely,

Richard L. Beam
Associate Director for
Pipeline Safety Regulation
Materials Transportation Bureau

Enclosure

June 4, 1984

Mr. Richard L. Bean [sic]
Associate Director, DMT-30
Office of Pipeline Safety Regulations
Research and Special Programs Adm.
Dept. of Transportation
400 Seventy Street, S.W.
Washington, D.C. 20590

Dear Mr. Bean [sic]:

This is a interpretation request relating to several accidents I have heard about concerning the installation of plastic pipe and the tracer wire being in direct contact with the pipe or in close proximity to it.

Since when lightning runs in on the tracer wire and the subsequent heat damages the pipe, I believe we can interpret the tracer wire to be a possible source of heat. In this case, Section 192.325(c) would prevail, and requires the tracer wire to be installed with sufficient clearance so that the heat would not impair or damage the pipe. I would personally like to see this section amended by requiring at least a six inch clearance between the pipe and tracer wire, and of course, the wire being installed above the pipe. This would help also as a warning to excavators prior to hitting the pipe.

My other area of concern deals with Sections 192.321 and 192.325(c). Section 192.321, concerns the installation of <u>all</u> plastic pipe and does not differentiate between transmission lines, mains or services. Under this section, I interpret subpart (e) to mean that all pipe, including services, must have a tracer wire installed, or some other means of locating the pipe. If my interpretation of the tracer wire, being a source of heat, is correct as mentioned above, should not Section 192.325(c) be amended to include service lines instead of just mentioning plastic transmission lines or mains in this section?

Your timely response will be appreciated.

Yours truly,

Tom Dixon, Chief
Pipeline Safety Section
Transportation Division